DOCUMENT RESUME

ED 358 184 UD 029 213

AUTHOR Crosby, Margaree S.; Owens, Emma M.
TITLE The Disadvantages of Tracking and Ability Grouping: A Look at Cooperative Learning as an Alternative.
INSTITUTION National Dropout Prevention Center, Clemson, SC.
PUB DATE Mar 93
NOTE 9p.
PUB TYPE Collected Works - Serials (022)
JOURNAL CIT A Series of Solutions and Strategies; n5 Mar 1993

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS *Ability Grouping; Academic Achievement; Black Students; *Cooperative Learning; Dropout Prevention; Dropout Research; *Educational Discrimination; Educational Practices; Educational Research; Elementary Secondary Education; *Grouping (Instructional Purposes); Hispanic Americans; *Minority Group Children; Nontraditional Education; *Student Placement; Track System (Education)
IDENTIFIERS Alternative Assessment

ABSTRACT

Educational practices in tracking and ability grouping are reviewed, and it is suggested that cooperative learning strategies are effective alternatives for students who need preparation for the challenges of citizenship in the future. Research studies have given rise to many criticisms of tracking, particularly as it relates to minorities, although some educators continue to believe that it has beneficial effects. Educational research has indicated that cooperative learning may have important benefits for African American and Hispanic students. It builds on the social instincts of children as they work toward academic and social skills objectives. The controversy over tracking and ability grouping remains unresolved, but the practice continues to be widely implemented. Cooperative learning appears to be a viable alternative, which may eventually eliminate interest in tracking and ability grouping. Many educators will need professional development to become proficient in cooperative learning processes. (SLD)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)
This document has been reproduced as received from the person or organization originating it.
Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY
J. Smink
Nat. Drop. Prevention Ctr.
TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

ED358184

A Series of
Solutions and Strategies

NATIONAL DROPOUT PREVENTION CENTER

March 1993 Number 5

The Disadvantages of Tracking and Ability Grouping: A Look at Cooperative Learning as an Alternative

By
Margaree S. Crosby and Emma M. Owens

Introduction

Technology and international competition are creating dramatic changes in the workforce skills needed to maintain a competitive business edge for a healthy economy in America. At the same time, demographic shifts in the population foreshadow serious gaps in the supply of qualified labor. According to the National Alliance of Business (1986), the overall competence of the workforce is predicted to decline while the need for more and better trained workers will grow.

The mission of our public schools historically has been to develop moral, responsible, and educated citizens. Education has been viewed as a means to increase opportunity, inculcate social values, and foster upward mobility (Oakes, 1985). By the turn of the twentieth century, however, schools were finding it hard to deal with the increasing racial, linguistic, cultural, and religious diversity of the student population. Social Darwinism—the theory that children from lower classes were inherently inferior—led to the development of various ways of sorting and classifying children.

For more than 100 years, one of the most persistent practices in schools has been to group students into course sequences and classrooms on the basis of personal qualities, performances, or aspirations. Since students enter school with a wide range of differences in their readiness to learn, tracking/ability grouping has appeared to make sense. The practice was developed around three general goals: (1) to raise the academic achievement of students beyond what it would be in mixed ability classes; (2) to help students feel better about school and themselves as learners; and (3) to help teachers be more effective (George, 1988).

Educators have argued about the effects of tracking/ability grouping from the beginning. Although researchers and those who review

research have reached no consensus, the view of the authors of this paper is that tracking/ability grouping is a harmful educational practice which results in lower educational attainment and higher dropout rates, especially for students living in poverty and for racial and ethnic minorities. This paper reviews the practices of tracking/ability grouping and suggests that cooperative learning strategies are effective alternatives for students who need optimum preparation for the challenges of citizenship in the twenty-first century.

Synthesis of Research on Ability Grouping

Research studies have attempted to answer two major questions regarding tracking: (1) Is there bias involved?, and (2) Does tracking have a significant impact on educational outcomes?

Studies have generated little agreement on the answers to these questions. One group of researchers has stated that curriculum tracking helps to maintain and perpetuate social class status from one generation to another by sorting children from different backgrounds into different curricula programs where they are exposed to differential treatments and encounter different learning environments (Alexander & Eckland, 1980; Eder, 1981; Oakes, 1982). Another group of researchers has suggested that tracking plays a minimal role in status maintenance because students are placed into tracks more on the basis of ability and motivation than on the basis of social class membership (Davis & Haller, 1981; Alexander & Cook, 1982).

A third group of researchers has asserted that the debate is irrelevant, because tracking in high school does not have a significant impact upon achievement, values, and educational outcomes (Alexander & Cook, 1982; Kulik & Kulik, 1982). Yet, Slavin (1986) has found evidence that ability grouping is maximally effective within classrooms when it is done for only one or two subjects and students are studying in heterogeneous classes for most of the day.

Regardless of what the research shows, however, the attitudes of many educators and parents favor tracking/ability grouping. Eighty-five percent (85%) of the research says tracking is not beneficial while eighty-five percent (85%) of the schools continue to practice it (George, 1988). Since most of the research appears to indicate that tracking/ability grouping does not do what it is expected to do with a majority of the students (George, 1988; Slavin, 1991a), the practice is considered by many to be one of the major unresolved issues in our educational system today.

Crosby and Owens (1991) examined the degree to which principals feel that ability grouping/tracking contributes to the quality of education in their schools. The study sought to determine if the principals in a statewide public school system had attitudes which supported tracking/ability grouping. The researchers found that, as a group, the principals did not express supportive or facilitative attitudes toward tracking/ability grouping. The study also found no differences in attitude between elementary and secondary principals, male and female principals, or black and white principals, or differences in attitude based on years of experience as a principal or on the characteristics of the student populations of their schools.

The study did find that the principals believed that tracking/ability grouping is beneficial for minority students, that ability grouping often results in racially or ethnically identifiable tracks or groups, and that being poor or black causes teachers to lower their expectations and assign these students to lower groups. The principals also expressed their belief that parents are given

an opportunity to help decide to which tracks their children are assigned.

The practice is supported also by parents of high achievers who tend to believe ability grouping is important for their children's success. These parents often use their understanding of school district politics to influence decisions favoring tracking. In addition, tracking persists because curriculum materials and traditional instructional strategies are familiar and, therefore, are considered easier by many teachers. For this reason, many career teachers actively lobby against the adoption of heterogeneous grouping strategies.

Lacking firm research support for the benefits of tracking/ability grouping, the central issue becomes one of equity. Vanfossen, Jones, and Spade (1987), examined the role of tracking/ability grouping in the perpetuation of socioeconomic status advantage by asking the question: Does the pattern of recruitment of students into the different curricular programs reveal a social class bias?

The researchers found that the chances of a student being in the top academic track are 53% if a student is in the top socioeconomic status (SES) quartile and only 19% if the student is in the bottom SES quartile. The chances that a student will be in a vocational track are 10% if the student is in the top SES quartile and 30% if the student is in the bottom SES quartile.

Regardless of the reasons for placement, (prior academic performance, grades, teachers' recommendations, or educational aspirations—all of which are influenced by socioeconomic background), there are substantial social class differences in the resulting track designations. The findings by Vanfossen and associates (1987) are consistent with other reports indicating that classes in the academic track are more serious, spend more time on task, spend less time handling discipline, and place a greater emphasis upon learning.

The practice is one of the most undemocratic in our schools and often results in inequality of educational opportunity (Nicholls, 1989; Massachusetts Advocacy Center, 1990). A disparity exists in the quantity and quality of education between the high track and the low track. Students in the high track often have the most motivated and best trained teachers, have better equipped classrooms and smaller class size, have higher expectations placed on them by their teachers, and engage in creative problem solving and dialogues.

In contrast, students in the low track are expected to learn more slowly and at lower cognitive levels. They have fewer demands placed on them and spend the majority of their time in routine activities such as rote learning, writing in workbooks, basic computation, and memorization (Barquet, 1992). As a consequence, many children who are placed in a low track show a progressive retardation as they progress through school (Reynolds, 1989).

Cooperative Learning: An Alternative To Tracking and Ability Grouping

While tracking/ability grouping has been criticized for its impact on minorities, research reviewed by the Massachusetts Advocacy Center (1990) indicates that cooperative learning may have important benefits for African-American and Hispanic students. In today's information/service economy, individuals need to know how to work with others in teams to solve problems or to accomplish tasks, yet most classroom activities require students to work independently and to compete for grades. Cooperative learning builds upon the social instincts of children and adolescents as well as

supplementing and replacing independent seat work with activities for small, mixed-ability groups.

Since students are expected to work together toward the completion of a group task that benefits each member, most cooperative learning activities include both an academic and a social skills objective. Students are involved in team efforts designed to help one another master academic material. Simply putting students in groups and calling it cooperative learning, however, is rarely successful. Students who have never been taught how to work effectively with others cannot be expected to do so automatically. All students need to become skillful in communicating, building and maintaining trust, providing leadership, and managing conflict. As students become more effective in working with each other, academic achievement improves (Johnson & Johnson, 1984).

Conditions for Effective Cooperative Learning

Certain conditions are required if cooperative learning strategies are to increase students' efforts to achieve and improve the quality of their relationships with classmates. Among these conditions are positive interdependence, face-to-face interaction, and individual accountability (Johnson & Johnson, 1990). In addition, social skills have to be taught just as systematically as any subject. Doing so requires that teachers communicate to students the need for such skills, define and model the skills, have students practice them, provide feedback on how well students perform the skills, and make sure that students fully integrate the skills into their behavior repertoires (Johnson & Johnson, 1990). There are four levels of cooperative skills (Johnson & Johnson, 1984, pp. 45-48):

1) *Forming*: those skills directed toward organizing the group and establishing minimum norms for appropriate behavior such as "stay with the group," "use quiet voices," and "encourage everyone to participate."

2) *Functioning*: those skills involved in managing the group's efforts to complete the task and maintain effective working relationships such as "expressing support and acceptance," "offering to explain or clarify," and "asking for help."

3) *Formulating*: those skills needed to build deeper understanding of the material, to stimulate the use of higher quality reasoning strategies, and to ensure mastery and retention of the material such as "summarizing out loud what has just been read or discussed," "elaborating," and "discussing the reasoning process."

4) *Fermenting*: those skills required for challenging other group members' conclusions and reasoning such as "criticizing ideas, not people," "integrating a number of ideas," and "generating a number of plausible answers or solutions from which to choose."

There also is strong evidence that team rewards are an important element in producing basic skills achievement. It is not enough to simply tell students to work together. They must be willing to accept the responsibility for one another's achievement, and team rewards encourage this willingness. When the group's task is to ensure that every member *learns* something (rather than *does* something), it is in the interests of every member to spend time explaining concepts to his or her team members (Slavin, 1991b).

The teacher's role in cooperative learning is more than just structuring cooperation among students (Johnson & Johnson, 1984), and there are a number of step-by-step guides to facilitating effective cooperative learning classroom practices (Johnson & Johnson, 1991; Topping, 1988; Calderon, 1990; Slavin, 1991a; and Ellis & Whalen, 1992). In addition, there is a need for greater professional cooperation and support at the classroom level from principals, teachers and other staff members to implement and/or facilitate highly effective cooperative learning processes at the school.

Research on the Effectiveness of Cooperative Learning

In a major synthesis of the research on cooperative learning, Slavin (1991b) identified 67 studies that he considered "high-quality." Of those studies, 41 (61%) found significantly greater achievement in cooperative learning than in control (traditional) classes. Twenty-five (37%) found no differences, and in only one study did the control group outperform the cooperative learning group. However, the effects of cooperative learning varied considerably according to the particular methods used. The studies of methods in which both group goals and individual accountability were present resulted in consistently positive effects on achievement (84%).

Studies of the effectiveness of Group Investigation, a cooperative learning strategy, were carried out in Israel to ascertain the method's effects on achievement and social interaction. In Group Investigation, students take an active part in planning what they will study and how. They form cooperative groups according to a common interest in a topic. All group members help plan how to research their topic, divide the work among themselves, and each member carries out his or her part. Finally, the group synthesizes and summarizes its work and presents these findings to the class (Sharan & Sharan, 1990).

The researchers found that at both the elementary and secondary levels, students from the Group Investigation classes generally demonstrated a higher level of academic achievement and did better on questions assessing high-level learning than did their peers taught with the whole-class method.

An analysis of students' spoken language found that both lower-class Middle Eastern and middle-class Western students used more words per turn of speech than did their ethnic peers taught with the whole-class method. Moreover, those lower-class Middle Eastern students—often considered to have limited language ability—who studied in Group Investigation classes used as many words per turn during the discussions as did the middle-class Western students in whole-class instruction. The studies also found that Group Investigation promotes cooperation and mutual assistance among students (Sharan & Sharan, 1990).

Research conducted by Slavin and his associates at the Center for Research on Elementary and Middle Schools routinely analyzed achievement outcomes according to students' pretest scores. They found that those students scoring in the top third, middle third, and low third all gained consistently relative to similar students in traditional classes as long as the cooperative learning program provided group goals and individual accountability (Slavin, 1991c).

Positive effects on intergroup relations have been found for all forms of cooperative learning. Two studies included follow-ups of intergroup friendships several months after the end of the studies. Both found that students who had been in cooperative learning

classes still named significantly more friends outside their own ethnic groups than did students who had been in traditional classes (Slavin, 1991b).

The Massachusetts Advocacy Center (1990) highlighted research which shows that cooperative learning promotes higher productivity and achievement, more frequent use of higher level reasoning, greater retention of facts, better problem-solving skills, and improvement in conceptual skills. Other outcomes for cooperative learning methods have included greater acceptance of mainstreamed students, improvements in students' self-concepts, liking school, development of peer norms in favor of doing well academically, feelings of individual control over student's own fate in school, and cooperativeness and altruism (Slavin, 1991b).

Cooperative Learning Models with Proven Benefits to Students

The Massachusetts Advocacy Center (1990, pp. 118-119) described cooperative learning models that have proved especially beneficial to students who have experienced little success in classes organized around traditional instructional approaches. Several of these are described below:

Learning Together—Students work together in four- or five-member heterogeneous groups on assignments to produce a single group product. Students may be evaluated and rewarded on the basis of this single product or on a combination of their own performance and the overall performance of the group.

Group Investigation—Students work in small heterogeneous groups and assume substantial responsibility for deciding what information they will gather, how they will organize themselves to gather it, and how they will communicate what they have learned to their classmates. For example, a group might choose a subtopic within a class unit, break down this subtopic into individual tasks for each member of the group, and prepare a group report, presentation, or display for the whole class.

Jigsaw—A subject or topic to be learned is divided into sections or subtopics and each member of a heterogeneous "home base" group is assigned responsibility for one section. Members of different home base groups who are working on the same section meet together in "expert groups" to discuss their topics. They then return to their home base groups and take turns teaching groupmates about their sections. Students are evaluated individually through quizzes, projects, or the like.

Jigsaw II—Similar to the original Jigsaw, all students are first provided common information. Students then break into expert groups to study their specific subtopics. There is team recognition based on team scores and often a newsletter recognizing team winners and individual high scorers, in addition to individual grades and scores.

Team-Games-Tournament (TGT)—Student work together in four- or five-member heterogeneous teams to help one another master material and prepare for competitions against members of other teams. For the competitions, each student is assigned to a three-person table with students from two other teams who are similar in skill level. In this way, all students have an equal chance to earn points to contribute to their team score.

Student Team-Achievement Division (STAD)—In this variation of TGT, games and tournaments are replaced with a quiz. Thus while both TGT and STAD combine cooperative learning with team competition and group rewards for individual performance, STAD

depersonalizes the competitive aspects of TGT. Quiz scores are translated into points based on how a student's individual score compares with the scores of other students of similar ability—whose identities are not disclosed by the teacher—or are based on individual improvement.

Team-Assisted Individualization (TAI)—Developed especially for math classes in grades three to six. TAI combines direct instruction by the teacher with follow-up practice using a team learning approach. Students work in heterogeneous teams on material appropriate to their individual skills level. Teammates help one another with problems and check on another's work. Meanwhile, the teacher calls forward students from the various teams who are working at the same level to instruct them as a group. In this way, TAI provides for both interactive peer learning and individualized instruction.

Cooperative Integrated Reading and Composition (CIRC)—This method is similar to TAI but designed for instruction in reading, writing and language arts. Students work in mixed-ability teams on a series of reading activities or in writing in peer response groups using the "process writing" approach.

Conclusion

Although the controversy over tracking/ability grouping remains unresolved, the practice continues to be implemented widely throughout this nation in spite of the lack of research support. The practice is believed by many researchers to contribute significantly to the dropout problem and to the growth of an unproductive underclass in this country. More educators must become sensitive to the effects of tracking/ability grouping on students from at-risk situations. As alternative classroom strategies, cooperative learning methods appear to be more effective than traditional methods in increasing the achievement of students from at-risk situations. With the variety of effective cooperative learning approaches available to teachers, tracking/ability grouping may no longer be viable options. Many educators, however, will need professional development in order to become proficient in cooperative learning processes.

Possibilities

"The future of cooperative learning is rich in possibilities...If we use the principles of cooperative learning and the values of cooperation—empowering teachers and students, valuing cooperation as both process and content, and affirming interpersonal relations—we can create schools that are truly cooperative and a society in which people really do work together for shared, equitable goals" (Sapon-Shevin & Schniedewind, 1990, p. 65).

References

Alexander, K. L., & Cook, M. A. (1982). Curricula and coursework: A surprise ending to a familiar story. *American Sociological Review, 47*, 626-40.

Alexander, K. L., & Eckland, B. U. (1980). The Explorations in Equality of Opportunity Survey of 1955 High School Sophomores. *Research in Sociology of Education and Socialization, 1*, 31-58.

Barquet, N. (1992). Tracking perpetuates the class system in the United States of America. *Equity Coalition for Race, Gender, and National Origin, 3*(1), 3-5. Programs for Educational Opportunity, University of Michigan School of Education.

Calderon, M. (1990). *Cooperative learning for limited English proficient students.* (Report 3). Baltimore, Maryland: Johns Hopkins University Center for Research on Effective Schooling for Disadvantaged Students.

Crosby, M. S., & Owens, E. M. (1991). *An assessment of principal attitudes toward ability grouping in the public schools of South Carolina.* Clemson, South Carolina: Clemson University Center for the Study of the Black Experience in Higher Education.

Davis, S. A., & Haller, E. T. (1981). Tracking ability, and SES: Further evidence on the Revisionist/

Meritocratic debate. *American Journal of Education, 89*, 283-304.

Eder, D. (1981). Ability grouping as a self-fulfilling prophecy: A micro-analysis of teacher student interaction. *Sociology of Education, 54*, 151-62.

Ellis, S. E., & Whalen, S. F. (1992). Keys to cooperative learning. *Instructor, 101*(6), 34-37.

George, P. S. (1988). *What's the truth about tracking and ability grouping really? An explanation for teachers and parents.* Gainesville, Florida: University of Florida Teacher Education Resources.

Johnson, D. W., & Johnson, R. T. (1984). *Circles of learning: Cooperation in the classroom.* Alexandria, VA: Association for Supervision and Curriculum Development.

Johnson, D. W., & Johnson, R. T. (1990). Social skills for successful group work. *Educational Leadership, 47*(4), 29-33.

Johnson, D. W., & Johnson, R. T. (1991). *Cooperation in the classroom* (5th ed.). Minneapolis: Interaction Book Company.

Kulik, C., & Kulik, J. A. (1982). Effects of ability grouping on secondary school students: A meta-analysis of evaluation findings. *American Education Research Journal, 19*, 415-28.

Massachusetts Advocacy Center. (1990). *Locked in / locked out: Tracking and placement practices in public schools.* Boston: The Eusey Press, Inc.

National Alliance of Business. (1986). *Employment policies: Looking to the year 2000.* Washington, DC: National Alliance of Business.

Nicholls, J. (1989). *The competitive ethos and democratic education.* Cambridge: Harvard University Press.

Oakes, J. (1982). Classroom social relationships: Exploring the Bowles and Gintis Hypothesis. *Sociology of Education, 55*, 197-212.

Oakes, J. (1985). *Keeping track: How schools structure inequality.* New Haven, CT: Yale University Press.

Reynolds, M. C. (1989). Students with special needs. In M. C. Reynolds (Ed.), *Knowledge base of the beginning teacher* (pp. 129-142). Oxford: Pergamon.

Sapon-Shevin, M., & Schniedewind, N. (1990). Selling cooperative learning without selling it short. *Educational Leadership, 47*(4), 63-65.

Sharan, Y., & Sharan, S. (1990). Group investigation expands cooperative learning. *Educational Leadership, 47*(4), 17-21.

Slavin, R. E., & Madden, N. A. (1989). What works for students at risk: A research synthesis. *Educational Leadership, 46*(5), 4-13.

Slavin, R. E. (1986). *Ability grouping and student achievement in elementary schools: A best-evidence synthesis.* (Report 1). Baltimore, Maryland: Johns Hopkins University Center for Research on Elementary and Middle Schools.

Slavin, R. E. (1991a). *Student team learning: A practical guide to cooperative learning,* 3rd ed. Washington, D.C.: National Education Association.

Slavin, R. E. (1991b). Synthesis of research on cooperative learning. *Educational Leadership, 48*(5), 71-82.

Slavin, R. E. (1991c). Are cooperative learning and 'untracking' harmful to the gifted? *Educational Leadership, 48*(6), 68-71.

Topping, K. (1988). *The peer tutoring handbook: Promoting cooperative learning.* Cambridge, Maryland: Brookline Books.

Vanfossen, B. E., Jones, J. D., & Spade, J. A. (1987). Curriculum and tracking status maintenance. *So-*

ABOUT THE AUTHORS

Margaree S. Crosby is an Associate Professor and Coordinator of Elementary and Early Childhood Education in the College of Education at Clemson University, Clemson, SC. Dr. Crosby received an Ed.D. in Urban Education/Reading from The University of Massachusetts, Amherst, MA.

Emma M. Owens is an Assistant Professor in the College of Education, Clemson University. She has had extensive experience at every level teaching students from at-risk situations. Dr. Owens received an Ed.D. from Clemson University, Clemson, SC.

The National Dropout Prevention Center (NDPC) is a partnership of concerned leaders—representing business, educational and policy interests, and Clemson University—created to significantly reduce America's dropout rate. NDPC is committed to meeting the needs of youth in at-risk situations by helping to shape school environments which ensure that all youth receive the quality education to which they are entitled. NDPC provides technical assistance to develop, demonstrate, and evaluate dropout prevention efforts; conducts action research; and collects, analyzes, and disseminates information about efforts to improve the schooling process.